IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

INTELLECTUAL VENTURES I LLC, et al.,

Plaintiffs,

Civil Action No. 2:21-CV-390-JRG-RSP

LEAD CASE

v.

TOYOTA MOTOR CORP., et al.,

JURY TRIAL DEMANDED

Defendants.

PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF

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I. <u>INTRODUCTION</u>

Plaintiffs Intellectual Ventures I LLC and Intellectual Ventures II LLC (collectively, "IV") submits this brief in support of its proposed constructions for the disputed claim terms of the Patents-in-Suit, as identified below:

U.S. Patent No.	Exhibit No.	Asserted Claim(s)	Number of Disputed Terms (or Term Families)
6,832,283 ("the '283 Patent")	A	1, 21, and 22	1
9,291,475 ("the '475 Patent")	В	11	2
7,484,008 ("the '008 Patent")	С	75	31
10,292,138 ("the '138 Patent")	D	1, 4, and 8	1
7,382,771 ("the '771 Patent")	Е	1, 3, 6, and 9	2^2
8,811,356 ("the '356 Patent")	F	1, 3, 5, and 22	1
9,681,466 ("the '466 Patent")	G	1, 2, and 6	2
9,602,608 ("the '608 Patent")	Н	1, 8, and 11	2
9,232,158 ("the '158 Patent")	I	1, 9, and 15	3
8,953,641 ("the '641 Patent")	J	11, 23, and 25	0^3
7,684,318 ("the '318 Patent")	K	1, 8, 11, and 14	0^4

The Court should adopt each of IV's proposed constructions, which are properly grounded in the intrinsic record and, where appropriate, provide helpful clarity to a person of ordinary skill in the art ("POSITA"). In contrast, the Toyota Defendants⁵ propound constructions that improperly read limitations into the claims from the specification, are based on misinterpreting the patent's prosecution histories, or are otherwise unsupported by the intrinsic record.

¹ In addition to the three disputed claim terms of the '008 Patent, the Parties have jointly proposed an agreed-upon construction for one term of this Patent. *See* Dkt. 95-1 at 1.

² In addition to the two disputed claim terms of the '771 Patent, the Parties have jointly proposed agreed-upon constructions for two terms of this Patent. *See* Dkt. 95-1 at 1.

³ Although the parties previously identified a disputed claim term for the '641 Patent (*see* Dkt. 95-2 at 4), IV has since narrowed the asserted claims, thereby mooting that dispute.

⁴ The parties have not identified any claim construction disputes for the '318 Patent, and have jointly proposed agreed-upon constructions for two terms of this patent. *See* Dkt. 95-1 at 2.

⁵ Defendants Toyota Motor Corporation, Toyota Motor Engineering & Manufacturing North America, Inc., Toyota Motor North America, Inc., and Toyota Motor Sales, U.S.A., Inc. are collectively referred to herein as "Toyota" or "Defendants."

II. THE DISPUTED CLAIM TERMS

A. '283 Patent

The '283 Patent (Ex. A), titled "Method for Addressing Network Components," issued from an application having an earliest priority date of June 15, 2000. The '283 Patent "relates to a method for addressing components of a network, especially in the case of data bus systems in transport means, in which each component is assigned a first address for the mutual communication within the network and the first addresses are stored in a central register." '283 Patent at 1:10-15.

1. "first address" (Claims 1, 3, and 21)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
"a logical address that specifies the physical	Plain and ordinary meaning
location of a control device, and a function-	
specific address associated with a subdivided	
component of the device"	

The Court should construe the term "first address" in the '283 Patent to mean "a logical address that specifies the physical location of a control device, <u>and</u> a function-specific address associated with a subdivided component of the device." The intrinsic record makes clear that a "first address" includes two addresses that identify <u>both</u> a function block <u>and</u> the control device from it was subdivided.

In claim 1, a "component" (addressed *supra*) is tied to its "first address," because "each *component is assigned a first address*." The specification introduces the term "first address" in the Summary of the Invention and explains that, "[a]ccording to the invention, the component for the communication with the other network has two addresses, namely the first address for the communication within the data bus and the second address of the second network." '283 patent at 2:66-3:2. The patent's Detailed Description further defines "first address" as including <u>both</u> a *logical address* of a control device and a *function-specific* address of a subdivided functional

block. *Id.* at 6:41-58. In addition, Fig. 2 depicts "a simplified representation of an allocation of addresses to different components as can be stored in the central register *according to the invention*." *Id.* at 5:58-60 (emphasis added). Both portions of the "first address"

LogicalAddr	FunctionAddr	InstAddr	IP Addr
0x100	0×22	0	10.0.22.1
	0x06	1	
	0x08	1	
	0x40	1 1	
0x101	0x51	0	10.0.51.1
	0x06	2	
0x102	0x33	1	10.0.33.2
0x103	0x33	2	10.0.33.3
0x104	0x60	0	10.0.60.1
	0×40	2	
	0x06	3	
	0×08	2	

are shown in FIG. 2 (reproduced to the right). The logical

Fig. 2

addresses in the LogicalAddr column specify the physical location of a control device, and the function-specific addresses in the FunctionAddr column specify the subdivided functions of the device.

Furthermore, during prosecution of the application for the '283 Patent, the Applicant repeated its definition of "first address" as having both logical and function portions, equating it with "the invention": "Applicant's attorney explained the *invention* and how the components can have *logical as well as functional addresses* and further can be assigned IP addresses from the second network." Ex. N, 6/30/04 Examiner Interview Summary (emphasis added). Accordingly, the intrinsic record repeatedly indicates that "first address" means "a logical address that specifies the physical location of a control device, and a function specific address associated with a

subdivided component of the device." The Court should adopt this construction.

IV would also be amenable to adoption of the recent construction of this same claim term of the '283 Patent by the Western District of Texas as meaning "an address that includes a logical address component and a function-specific address component." *See* Ex. L, Claim Construction Order, *Intellectual Ventures I LLC v. Gen. Motors Co.*, No. 6:21-cv-1088-ADA, Dkt. 83 at 1 (W.D. Tex. Dec. 1, 2022) ("GM Claim Construction Order"); Ex. M, Memorandum in Support of Claim Construction Order, *Intellectual Ventures I LLC v. Gen. Motors Co.*, No. 6:21-cv-1088-ADA, Dkt. 84 at 16-20 (W.D. Tex. Dec. 1, 2022) ("GM Claim Construction Opinion").

Toyota, by contrast, appears to be trying to construe "first address" more broadly as <u>not</u> requiring both logical and function-specific addresses. But, as explained, Toyota's proposal is contrary to the intrinsic record, which defines "first address" as set forth in IV's proposed construction.

B. <u>'475 Patent</u>

The '475 Patent (Ex. B), titled "Device, System and Method for Controlling Speed of a Vehicle Using a Positional Information Device" issued from an application having an earliest priority date of September 22, 2005. The '475 Patent "relates generally to navigational or positional information systems, and more particularly, to devices, systems, and methods for controlling a speed of a vehicle using a positional information device, e.g., a global positioning system (GPS) device." '475 Patent at 1:23-27.

1. "remote computing [device/system]" (Claim 11)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction	
Plain and ordinary meaning, no construction	"remote computing system": Plain and	
necessary	ordinary meaning, i.e., "remote computing	
	device." Otherwise indefinite	

The Court need not construe the term "remote computing device" in claim 11 of the '475 Patent. Claim 11 recites: "The non-transitory computer-readable medium of claim 8, wherein the *remote computing device* is configured to notify the recipient about the violation committed by the vehicle by permitting the recipient to view the indication of the violation via a browser." Claim 8, in turn, is directed to a "non-transitory computer-readable medium for notifying a recipient of a violation by a driver of a vehicle" that causes "a computing device in a vehicle" to make certain determinations and to "send, from within the vehicle *to a remote computing system*, an indication of the violation; *wherein the remote computing device* is configured to notify a recipient about the violation committed by the vehicle." Claim 11 would be clear to a POSITA, and needs no further construction.

2. "recipient" (Claim 11)

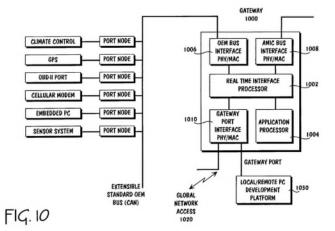
Plaintiffs' Proposed Construction	Defendants' Proposed Construction	
Plain and ordinary meaning, no construction	Plain and ordinary meaning, i.e., "an	
necessary	individual who receives a notification"	

There also is no need to construe "recipient" in claim 11, or in claim 8 from which claim 11 depends. As indicated above, claim 8 recites "... notifying a recipient of a violation by a driver of a vehicle," and claim 11 further states that "the remote computing device is configured to notify the recipient about the violation committed by the vehicle by permitting the recipient to view the indication of the violation via a browser." The meaning and context of "recipient" would be readily apparent to a POSITA, as well as any lay-juror, and thus requires no clarification.

C. '008 Patent

The '008 Patent (Ex. C), titled "Apparatus for Vehicle Internetworks," issued from an application having an earliest priority date of October 6, 1999. The '008 Patent is directed to a specific, novel, and non-obvious solution to the longstanding problem of how to bridge multiple networks in a vehicle while ensuring that data is translated and passed between the networks as quickly as possible. To accomplish this, the '008 Patent describes a gateway that includes both an

application processor and a real time processor. An example of the gateway is illustrated in FIG. 10 (reproduced to the right). As described in the specification of the '008 Patent, for example, the gateway can be used



to bridge a number of different networks,

including the Automotive Multi-media Interface Consortium (AMI-C) bus, the Original Equipment Manufacturer (OEM) bus, external networks, and a local development network, to name just a few. '008 Patent at 17:44-57. All of these networks may have sensors that are configured for the protocol the particular network uses and may provide data intended for the gateway in various different protocols. The gateway needs to quickly and efficiently translate and

route the data as well as potentially performing security functions. *Id.* at 8:57-67.

As shown in FIG. 10, the gateway 1000 includes interfaces to the various networks. In the illustrated example, the interfaces include an OEM bus interface 1006, an AMI-C bus interface 1008 and a gateway port interface 1010 for global network access 1020 and a local/remote PC development platform 1030. The illustrated gateway 1000 also includes a real time interface processor (RTIP) 1002 and an application processor 1004. The RTIP 1002 is communicatively coupled between all of the interfaces 1006, 1008 and 1010 as well as the application processor

1004. In addition, the RTIP 1002 and the application processor 1004 are separate processors that each perform different processing functions. "The application processor 1004 can host parts of all of the proxy" and generally provides high level processing functions. *Id.* at 18:26-27. More specifically, "[t]he application processor 1004 can host applications associated with either the AMI-C or OEM buses, such as dealing with passenger conveniences or vehicle operations." *Id.* at 18:58-60. "The RTIP 1002 together with the interface components 1006-1010 represents a specialized preprocessor that omits sensing/actuation control functions...." (*id.* at 18:27-29). Additionally:

The RTIP 1002 performs the processing to route packets to the appropriate destinations and issues commands for control of networks for which the gateway 1000 is in the role of master. Thus, the RTIP 1002 performs both the functions of a switch and network master. The RTIP 1002 further routes communications to non-real time systems, such as the application processor 1004.

Id. at 18:51-57 (emphasis added).

Claim 75, the sole asserted claim of the '008 Patent, is the subject of a pending request for certificate of correction due to USPTO errors when the Examiner amended application claim 85 at the time of allowance and when the USPTO issued the patent with application claim 85 as patent claim 75. *See* Ex. O, 5/27/08 Amendment after Appeal at 15 (showing language of pending application claim 85 prior to allowance); Ex. P, 8/29/08 Notice of Allowability at 2-3 (reflecting Examiner's two amendments to application claim 85, but inaccurately stating the pending claim language, including by inadvertently replacing "gateway node" in the claim preamble with "method node" and deleting "interface" from the claim phrase "real-time interface processor"); Ex. C, '008 Patent at claim 75 (showing language of claim 75 as issued, but missing the Examiner's deletion of one of the "operable to" phrases); Ex. Q, 3/25/22 Request for Certificate of Correction at 3 (requesting corrections to claims, including deletion of the "operable to" phrase in claim 75).

Thus, with the appropriate corrections applied, claim 75 should read as follows:

75. A method gateway node configured to couple to a plurality of network elements, wherein the plurality of network elements includes a local area network and at least one peripheral electronic device coupled to the local area network, the gateway node comprising:

at least one interface port to receive data packets;

at least one real-time <u>interface</u> processor operable to configured to perform real-time operations on the data packets; and

at least one application processor configured to perform high level processing functions, wherein the at least one real-time interface processor is coupled between the at least one interface port and the at least one application processor.

1. "gateway node" (Claim 75)

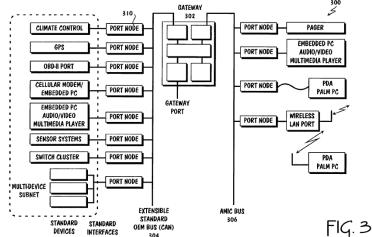
Plaintiffs' Proposed Construction	Defendants' Proposed Construction	
"a device that provides a bridge between	Plain and ordinary meaning	
heterogeneous networks"		

Claim 75 (as corrected) is directed to a "gateway node configured to couple to a plurality of network elements, wherein the plurality of network elements includes a local area network and at least one peripheral electronic device coupled to the local area network" and "comprising: at least one interface port ...; at least one real-time interface processor ...; and at least one application processor ..." The Court should construe "gateway node" to mean "a device that provides a bridge between heterogeneous networks."

The '008 Patent specification states that "[t]he gateway 1000 provides a bridge between heterogeneous networks." '008 Patent at 17:45-46. The '008 Patent further explains that the gateway bridges heterogeneous networks that are found in the vehicle. For example, the specification states that "the gateway 1000 mediates between but is not limited to four different networks: the OEM bus, the AMI-C bus, an external network (Global network access via a radio port), and a local development network." *Id.* at 17:45-50. Figure 10 (reproduced above) illustrates how the gateway node (1000) bridges the heterogeneous networks (e.g., CAN Bus, AMIC Bus, etc.). The specification further explains that the gateway (302) "links external networks and the Original Equipment Manufacturer

(OEM) 304 and AMI-C buses 306" by "provid[ing] protocol translation, security, and privacy functions in bridging these networks..." *Id.* at 8:53-55. Furthermore, Figure 3 (reproduced

to the right) illustrates how the gateway



bridges the CAN Bus (304), AMIC Bus (306), and the gateway port by routing and translating network traffic from one type of network to another type of network.

2. "application processor" (Claim 75)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
"a non-real-time processor that is not involved	Plain and ordinary meaning
in the routing of data packets that is shielded	
by the real-time interface processor (RTIP)	
from the real-time operations of the RTIP"	

The gateway node of claim 75 (as corrected) comprises "at least one interface port to receive data packets; at least one real-time interface processor configured to perform real-time

operations on the data packets; and **at least one application processor configured to perform high level processing functions**, wherein the at least one real-time interface processor is coupled between the at least one interface port and **the at least one application processor**." The Court should construe the term "application processor" to mean "a non-real-time processor that is not involved in the routing of data packets that is shielded by the real-time interface processor (RTIP) from the real-time operations of the RTIP."

The '008 Patent specification explains that "[t]he RTIP 1002 further routes communications to non-real time systems, such as the application processor 1004" where "[t]he application processor 1004 can host applications associated with either the AMI-C or OEM buses, such as dealing with passenger conveniences or vehicle operations." '008 Patent at 18:57-60. As shown in Figure 10 (reproduced above), the Application Processor (1004) is a non-real time processor that processes data that is routed to it by the real time processor (1002). The specification further teaches that the "application processors 1710 can then use any of a number of different

operating systems and programming languages being at once shielded from the real-time operations of the RTIP 1702, yet able to control the functions being executed and access raw data as required." *Id.* at 25:11-15. Moreover, as shown in Figure 17 (reproduced to the right), the

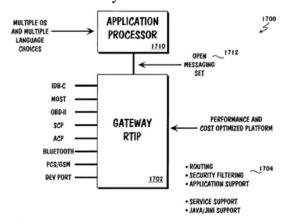


FIG. 17

Application Processor allows for higher level non-real time processing to be performed because it is shielded by the RTIP that provides the lower level security and routing functions and therefore can be programmed using the higher level programming languages to "deal[] with passenger conveniences or vehicle operations." *Id.* at 18:59-60.

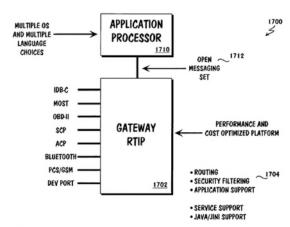
3. "real-time interface processor" (Claim 75)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
"a real time processor that performs the processing	Plain and ordinary meaning
to filter and route packets to the appropriate	
destinations within the connected networks"	

The gateway node of claim 75 (as corrected) comprises "at least one interface port to receive data packets; at least one real-time interface processor configured to perform real-time operations on the data packets; and at least one application processor configured to perform high level processing functions, wherein the at least one real-time interface processor is coupled between the at least one interface port and the at least one application processor." The Court should construe "real-time interface processor" in claim 75 to mean "a real time processor that performs the processing to filter and route packets to the appropriate destinations within the connected networks."

The specification teaches a POSITA that the claimed invention includes a real-time interface processor that filters and routes data from one connected network to another connected network. For example, the specification teaches that "[t]he RTIP 1002 performs the processing to route packets to the appropriate destinations, and issues commands for control of networks for which the gateway 1000 is in the role of master." *Id.* at 18:15-54. The specification further explains that "the RTIP 1002 performs both the functions of a switch and network master" and "routes communications to non-real time systems, such as the application processor 1004." *Id.* at 18:54-57. Figure 10 (reproduced above) illustrates how the Real Time Interface Processor (1002) bridges the global access network (1020), the OEM Bus (CAN), and the AMIC Bus.

In addition, the specification further explains that "[t]he gateway RTIP 1702 is performance and cost-optimized for supporting the lower level functions 1704 such as routing, security filtering, and application support for higher level applications." *Id.* at 25:5-8. Figure 17



(reproduced to the right) illustrates how the RTIP FIG. 17

bridges the various networks (e.g., IDB-C, MOST, ODB-II, etc.) by providing lower level functions (e.g., routing and security filtering, etc.).

D. '138 Patent

The '138 Patent (Ex. D), titled "Determining Buffer Occupancy and Selecting Data for Transmission on a Radio Bearer," issued from an application having an earliest priority date of May 8, 2006. The '138 Patent generally "relates to a mechanism to support Internet Protocol data flows within a wireless communication system. The invention is applicable to ... gateway queuing algorithms in packet data transmissions, for example, for use in the universal mobile telecommunication standard." '138 Patent at 1:23-28.

1. "wherein ... the first iteration ..." (Claims 1 and 8)

Claim Term	Plaintiffs' Proposed Construction	Defendants' Proposed Construction
"wherein the selection of the data occurs using a first iteration and a second iteration"	Plain and ordinary meaning, no construction necessary	Plain and ordinary meaning, i.e., "wherein the selection of the data occurs using a first repetition of an algorithm and a second repetition of the algorithm"
"wherein in the first iteration, the selection of the data is selected from a subset of the plurality of radio bearers based on the received parameters"	Plain and ordinary meaning, no construction necessary	? (no construction proposed)

The plain language of claims 1 and 8 of the '138 Patent would be clear to a POSITA and requires no further construction. The Court should reject Toyota's proposal, which seeks to construe the terms "first iteration" and "second iteration" to mean using the same algorithm twice. Toyota's proposal is wrong, first, because it is contradicted by the claims themselves, which recite:

... select data from the plurality of radio bearers for transmission using the single allocation of uplink resources, wherein the selection of the data occurs using a first iteration and a second iteration.

wherein in the first iteration, the selection of the data is selected from a subset of the plurality of radio bearers based on the received parameters,

wherein in the second iteration, the selection of the data is based on buffered data for respective radio bearers, ...

'138 Patent at claims 1, 8 (emphases added). Toyota's proposal makes no sense in view of the surrounding claim language, since the terms "first iteration" and "second iteration" are defined as having different requirements for the selection of the data: "from a subset of the plurality of radio bearers based on the received parameters" for first iteration, and "based on buffered data for respective radio bearers" for the second. Contrary to the claim language, Toyota's proposed "repetition" construction requires the selection of data using the same algorithm twice. *Chimie v. PPG Industries*, Inc., 402 F.3d 1371, 1377 (Fed. Cir. 2005) ("Claim construction begins with the intrinsic evidence of record, looking first to the claim language itself to define the scope of the patented invention."). Nothing elsewhere in the intrinsic record defines the claim language as Toyota proposes, nor does the intrinsic record evoke a clear and unmistakable disavowal of claim scope. *See Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012) ("It is likewise not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we do not

redefine words. Only the patentee can do that. To constitute disclaimer, there must be a clear and unmistakable disclaimer." (quotation marks and citation omitted)).

Toyota's proposed construction is starkly similar to a proposal already rejected by the Western District of Texas. Ex. M, *GM* Claim Construction Opinion at 74-77. There, the Court found no reason to depart from the plain and ordinary meaning and specifically found that introducing "steps" and removing antecedent basis for "the first integration" and "the second iteration" found later in the claim, would be confusing and improper. *Id.* at 76-77. Toyota's proposal here should similarly be rejected. Toyota introduces "an algorithm" and the word "repetition" into the claim, which would muddy the claim in the same way that the word "steps" would, and would improperly remove the antecedent basis for the term later in the claim.

E. <u>'771 Patent</u>

The '771 Patent (Ex. E), titled "Mobile Wireless Hotspot System," issued from an application that was filed on March 13, 2003. The '771 Patent "relates to wireless Internet access points, and in particular to providing a mobile wireless access point for use with high-speed wireless devices." '771 Patent at 1:5-7.

1. "Internet access" (Claims 1 and 9) / "access[ing] the Internet" / (Claims 1, 3, and 9)

Claim Term	Plaintiffs' Proposed	Defendants' Proposed
	Construction	Construction
"Internet access"/ "access the	Plain and ordinary	"the ability to send and/or
Internet" (Claims 1 and 9)	meaning, no construction	receive information via the
"accessing the Internet" (Claim 3)	necessary	Internet"

There is no need for the Court to construe the claim terms "Internet access," "access the Internet," or "accessing the Internet" in the '771 Patent because these terms would be readily understandable to a POSITA and any lay-juror. Internet access is bi-directional, with the ability to send and receive information and not, as Toyota proposes, "the ability to send and/or receive

information ..." In addition, Toyota's proposal to construe all of these terms "the ability to send and/or receive information via the Internet" is completely unnecessary and, if anything, would only create confusion. Toyota's one-size-fits-all approach would be needlessly difficult for a jury to apply to within the context of the claim language as a whole. For example, both claims 1 and 9 use the words "Internet access" multiple times, but in different contexts, reciting "a long-range, wireless Internet access interface operative to communicate with the Internet" and "client devices configured for short-range, high-speed wireless Internet access." In addition, claims 1 and 9 recite that the claimed system "enables client devices ... to use said mobile wireless hotspot system to access the Internet ..."—a verb phrase; whereas, Toyota's proposed construction ("the ability to send and/or receive information via the Internet") is a noun phrase. Claim 3 states that "passengers in said vehicle are capable of accessing the Internet," and Toyota's proposed construction for "accessing the Internet" would render other language redundant.

2. "without the need to access an external service controller server" (Claims 1 and 9)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
Plain and ordinary meaning, no construction	Plain and ordinary meaning, i.e., "without the
necessary	need to connect to an external server before
	enabling a client device to access the internet"

The Court need not construe the phrase "without the need to access an external service controller server" in claims 1 and 9 of the '771 Patent because a POSITA would understand it without further explanation. Yet, Toyota proposes to replace the claim language with the phrase "without the need *to connect to an external server* before enabling a client device to access the internet." To support its construction, Toyota is apparently relying on the prosecution history of the '771 Patent (Dkt. 95-3 at 8-9), but nothing in the prosecution history restricts the claimed invention from accessing any external server. For example, during prosecution, one of prior art

references at issue, Kokkinen, required "a service control server 90 which accesses the Internet through a gateway 92 [and] [m]uch of the functionality is *off-loaded* on the service controller server." Ex. R, 6/11/07 Response to Office Action at 8 (emphasis added). The Applicant distinguished its invention by arguing that Applicant's system was capable of *stand-alone* operation unlike the system of Kokkinen." *Id.* at 9. The examiner rejected the Applicant's argument, however, because "there [was] nothing in the claims about a stand-alone system nor has applicant negatively claimed an auxiliary server." Ex. S, 9/11/07 Non-Final Rejection at 4. The Applicant later amended the claims to include the "stand-alone" language and added the negatively claimed requirement regarding the auxiliary server that the examiner raised. Ex. T, 11/30/07 Response to Office Action at 2-5. Thus, the claim limitations themselves addressed the issues raised by the examiner, and the intrinsic record does not reflect a clear and unmistakable disclaimer of claim scope.

The Western District of Texas already rejected a proposed construction identical to Toyota's, finding no reason to depart from the plain and ordinary meaning. Ex. M, GM Claim Construction Opinion at 29-31 (rejecting "attempts to read into the claims the additional limitation of 'before enabling a client device to access the internet.'"). For those same reasons, the Court should similarly reject Toyota's proposed construction here.

F. '356 Patent

The '356 Patent (Ex. F), titled "Communications in a Wireless Network," issued from an application having an earliest priority date of December 27, 2006. The '356 Patent relates to "a new technique for uplink channel control that uses a feedback scheme as a substitute for the absence of channel reciprocity, with minimal impact on the ability of the air interface to support uplink shared channels" '356 Patent at 2:12-16.

1. "the processor is further configured to receive feedback information from a downlink control channel" (Claim 1); "receiving, by the UE, feedback information from a downlink control channel" (Claim 22)

Claim Term	Plaintiffs' Proposed	Defendants' Proposed
	Construction	Construction
"the processor is further	Plain and ordinary	"the processor is further configured
configured to receive	meaning, no	to receive information in response to
feedback information from a	construction necessary	the signal sent over the uplink
downlink control channel"		physical control channel from a
(Claim 1)		downlink control channel"
"receiving, by the UE,	Plain and ordinary	"receiving, by the UE, information
feedback information from a	meaning, no	in response to the signal sent over
downlink control channel"	construction necessary	the uplink physical control channel
(Claim 22)	-	from a downlink control channel"

There is no need to further construe these claims terms in the '356 Patent beyond their plain and ordinary meanings. Toyota, however, seeks to define the words "feedback information" in claims 1 and 22 as "information in response to the signal sent over the uplink physical control channel." Toyota is apparently seeking to import an embodiment from the specification as a limitation into the claims. That is improper absent an express definition in the patent or a clear and unmistakable disclaimer; neither is present here. See *Thorner*, 669 F.3d at 1366-67. The specification's disclosure of exemplary embodiments is insufficient to establish a narrower claim scope. *See Kara Tech. Inc. v. Stamps.com Inc.*, 582 F.3d 1341, 1348 (Fed. Cir. 2009). Because a POSITA would readily understand the meaning of "feedback information" in claims 1 and 22, the Court should adopt the plain and ordinary meaning without further construction. *See U.S. Auto. Ass'n v. Wells Fargo Bank, N.A.*, No. 2:18-cv-00245-JRG, 2019 U.S. Dist. LEXIS 99285, at *59 (E.D. Tex. June 13, 2019) ("feedback' and 'feedback information' each have their plain and ordinary meaning without the need for further construction").

G. <u>'466 Patent</u>

The '466 Patent (Ex. G), titled "Scheduling Transmissions on Channels in a Wireless Network," issued from an application having an earliest priority date of May 8, 2006. The '466

Patent "relates to a mechanism to support Internet Protocol data flows within a wireless communication system. The invention is applicable to, but not limited to, gateway queuing algorithms in packet data transmissions, for example, for use in the universal mobile telecommunication standard." '466 Patent at 1:21-26.

1. "first parameter"; "second parameter"; "third parameter" (Claims 1 and 6)

Claim Term	Plaintiffs' Proposed	Defendants' Proposed Construction
	Construction	
"first parameter";	Plain and ordinary	"first parameter" = parameter different
"second parameter";	meaning, no construction	than the second, and third parameters
"third parameter"	necessary	"second parameter" = parameter different than the first and third parameters
		"third parameter" = parameter different than the first and second parameters

The Court should adopt the plain and ordinary meaning of each of the "parameter" terns and reject Toyota's proposal to import a limitation requiring all of the recited "parameters" to be fundamentally different in nature from the others.

Each of claims 1 and 6 recites first, second, and third parameters. For example, claim 1 states: "A user equipment (UE)" or "method performed by a user equipment (UE)" comprising "... a first transmission including a **first parameter** corresponding to each of a plurality of channels and a second transmission including an allocation message for an uplink resource from the network device; ... wherein resources are allocated for data of each channel having a **second parameter above zero** prior to another channel's data for transmission having a **third parameter less than or equal to zero**; and wherein the **second parameter** is derived from a first channel's **first parameter** and the **third parameter** is derived from a second channel's **first parameter**." '466 Patent at claim 1 (emphases added). These limitations are summarized below:

"first parameter"	•	"corresponding to each of a plurality of channels"	
"second parameter"	•	 "derived from a first channel's first parameter" 	
	•	"above zero"	
"third parameter"	•	"derived from a second channel's first parameter"	
	•	"less than or equal to zero"	

Thus, each channel has a "first parameter," some channels may have a "second parameter above zero," and other channels may have a "third parameter less than or equal to zero." The claims require the second and third parameters to be "derived from" first parameters of different channels, which means that the second and third parameters will be different in nature from the first parameter and that the second and third parameters will have different values. But the claims never require the second and third parameters to be different *in nature* from one another.

This is not a situation in which claim differentiation applies. Rather, claim 1 indicates that the second and third parameters will have different values ("above zero" vs. "less than or equal to zero") and are derived from first parameters of different channels. For illustration, dependent claim 3 further specifies how the second and third parameters are derived from the first parameter, stating that "the second parameter is derived by multiplying the first channel's first parameter with a fourth parameter and the third parameter is derived by multiplying the second channel's first parameter with the fourth parameter." Thus, the second and third parameters are calculated in the same way: by multiplying their respective first parameters by a fourth parameter. The '466 Patent never forbids the second and third parameters from being, for example, the same variable but with different values in different channels.

Toyota argues that each of the paraments must be specific such that they are different in nature from one another. Nothing, however, in the plain language imposes such a restriction. For example, the claim language makes clear that "second parameter" and "third parameter" are each derived from the first parameter of a different channel. See Cl. 1 (stating "wherein the second

parameter is derived from a first channel's first parameter and the third parameter is derived from a second channel's first parameter"). Given that they are both derived from the first parameter for two different channels, both parameters could certainly correspond to the same parameter for two different channels.

2. "wherein resources are allocated for data of each channel having a second parameter above zero prior to another channel's data for transmission having a third parameter less than or equal to zero" (Claims 1 and 6)

Plaintiffs' Proposed Construction	Defendants' Proposed
	Construction
"wherein resources are allocated for a first set of data	Plain and ordinary meaning
[before/prior to] any are allocated for a second set of data,	
where the first set of data is the data of each channel [of a radio	
bearer] having a second parameter above zero and the second	
set of data is another channel's data-for transmission having a	
third parameter less than or equal to zero"	

This Court has already construed this same claim phrase in the '466 Patent, and should adopt that same construction here. *See Intell. Ventures II LLC v. Sprint Spectrum L.P.*, No. 2:17-CV-662-JRG-RSP, 2018 WL 6018625, at *12-14 (E.D. Tex. Nov. 16, 2018). In that case, Sprint argued to this Court that this claim phrase in the '466 Patent (as well as a nearly identical phrase in another patent, the '018) required that "resources must be allocated such that transmission of the data of each channel [of a radio bearer] having a second parameter above zero takes place before transmission of data of another channel [of a radio bearer] having a third parameter less than or equal to zero," whereas IV asserted that the claim phrase required only that the "allocation of resources for the data of each channel of a radio bearer having a second parameter above zero is provided before the allocation for another channel's data for transmission having a third parameter less than or equal to zero." *Id.* at *12-13 (emphasis added) ("The dispute is whether this term requires transmission of one set of data (with a second parameter above zero) before

transmission of another set of data (with a third parameter less than or equal to zero).").6

This Court rejected Sprint's arguments and ultimately "agree[d] with Plaintiff that 'for transmission' is an attribute of the 'another channel's data' [and] does not mandate that data with the second parameter greater than zero is necessarily transmitted before the data with the third parameter less than or equal to zero." *Id.* at *13. In light of the claim language and patent specification, this Court construed the disputed claim phrase to mean "wherein resources are allocated for a first set of data [before/prior to] any are allocated for a second set of data, where the first set of data is the data of each channel [of a radio bearer] having a second parameter above zero and the second set of data is another channel's data-for-transmission having a third parameter less than or equal to zero." *Id.* at *14.

H. '608 Patent

The '608 Patent (Ex. H), titled "System and Method for Notifying a User of People, Places or Things Having Attributes Matching a User's Stated Preference" issued from an application having an earliest priority date of June 27, 2002. The '608 Patent "relates generally to the field of communications systems and, in particular, to a system and method for providing localized resource information to mobile customers based on their explicit preferences that match profiles of media content about people, places and things." '608 Patent at 1:25-30.

⁶ The differences between the claim phrase in the '018 and '466 Patents were relatively minor. As reflected by the bracketed words in IV's proposed construction, the '018 Patent's claims state "before another channel's data ..." and "each channel of a radio bearer," whereas the '466 Patent's claims state "prior to" instead of "before" and do not recite "of a radio bearer." Because this current case against Toyota involves the '466 Patent and not the '018 Patent, IV would be amenable to using "prior to" instead of "before" and to not including the "of a radio bearer" language in the Court's construction here.

1. "first user preference" (Claims 1, 8, and 10)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
Plain and ordinary meaning, which is "previously saved preference information" (or "previously saved user preference information")	Plain and ordinary meaning

The Court should adopt the plain and ordinary meaning of "first user preference," which is "previously saved preference information." The claims themselves use the term in accordance with its plain meaning. Claim 1, for example, describes "receiving a first user preference." A POSITA would understand that a user preference resides in a variable that may reside in non-volatile memory and nothing in the claims limits how that preference is stored or determined. The specification contemplates "profile *or* preferences" of the user ('608 Patent at 2:45 (emphasis added)), as well as a "preference portfolio." *Id.* at 3:59; *see also id.* at 16:11-12. Indeed, the Western District of Texas construed this same claim term of the '608 Patent in accordance with IV's proposal. Ex. M, GM Claim Construction Opinion at 58 ("the Court construes the term 'first user preference' to mean 'previously saved user preference information'").It is unclear to what extent Toyota disputes IV's proposed meaning of "first user preference," and IV reserves the right to address Toyota's position in later claim construction briefing.

2. "receiv[ing] ... a geographic area limitation" (Claims 1 and 8)

Claim Term	Plaintiffs' Proposed	Defendants' Proposed
	Construction	Construction
"receiving a geographic	Plain and ordinary	Plain and ordinary meaning,
area limitation" (Claim 1);	meaning, no construction	i.e., "a geographic area supplied
"receive a geographic area	necessary	by a user for limiting the search
limitation" (Claim 8)		for matching objects"

The Court should adopt the plain and ordinary meaning of this claim phrase without further construction. Each of claims 1 and 8 use the phrase "geographic area limitation" twice: (1) "receiv[ing] a first user preference, a location of a mobile device of the first user, and a *geographic*

area limitation"; and (2) "determin[ing] an object of the plurality of objects that matches the first user based on at least: (a) the set of attributes for the object satisfies the first user preference, and (b) the distance between the received location of the mobile device of the first user and the object is within the *geographic area limitation*[.]" A POSITA would understand what a "geographic area limitation" is in this context without further explanation. Indeed, the specification provides several non-limiting examples describing a geographic area limitation. These include, a "prescribed geographic area" (*id.* at 4:19-22, 3:34-37, 9:65-66); and an area "within a specified vicinity of the user." *Id.* at 7:15, 8:51-52, 9:7-14, 15:14-18, 16:32-33.

The Court should reject Toyota's proposal, which seeks to define "geographic area limitation" as "a geographic area supplied by a user for limiting the search for matching objects." In addition to being unnecessary, Toyota's proposed construction wrongly imports an intent limitation, requiring that the user supply a geographical area specifically "for limiting the search for matching objects." Claims 1 and 8 do not limit how or why the "geographic area" is received or determined. Furthermore, some of the dependent claims specifically limit the "geographic area limitation," whereas independent claims 1 and 6 do not. For example, claims 5, 12, and 19 further limit the "geographic area limitation" to "a distance from the mobile device of the first user, or a geometric shape centered on the mobile device of the first user." *Id.* at claims 5, 12, and 19. Had the inventors meant to limit the "geographic area limitation" in claims 1 and 6, like Toyota proposes, they could have but opted not to do so.

Moreover, the Western District of Texas recently rejected a proposed construction of this same claim term of the '608 Patent that was identical to Toyota's proposal. *See* Ex. M, *GM* Claim

⁷ Further, "determining; an object... that matches" appears in a separate step of the claim. Ex. H ('608 Patent) at Claim 1. As such, including the imported limitation here and requiring limiting the search for matching objects would cause confusion when reading the claim term in the context of the entire claim.

Construction Opinion at 59-61 (declining to import limitations such as "for limiting the search for matching objects" into the claim). This Court should similarly reject Toyota's proposal.

I. <u>'158 Patent</u>

The '158 Patent (Ex. I), titled "Large Dynamic Range Cameras," issued from an application having an earliest priority date of August 25, 2004. The '158 Patent "relates generally to optical devices and more particularly to expanding the dynamic exposure range in digital cameras." '158 Patent at 1:26-28.

1. "a processing component [...] configured to [control/determine] an integration time of each [sensor/channel of the plurality of channels]" (Claims 1 and 9)

Claim Term	Plaintiffs' Proposed Construction	Defendants' Proposed Construction
"a processing component configured to control an integration time of each sensor" (Claim 1)	"a processing component configured to independently control an integration time of each sensor"	"a processing component that controls the integration time of the sensor included in each respective channel"
"a processing component configured to determine an integration time of each channel of the plurality of channels" (Claim 9)	"a processing component configured to independently determine an integration time of each channel of the plurality of channels"	_

A POSITA would understand the claimed "processing component" to refer to computer circuitry and programming for processing data to perform operations. In the context of the asserted claims, the "processing component" must be configured to independently control an integration time of each sensor (claim 1); or independently determine an integration time of each channel of the plurality of channels (claim 9).

The specification expressly teaches that "[t]he processor ... provides integration time control for each of the camera channels." Ex. I ('158 Patent) at 8:33-37. The '158 Patent explains that by providing the integration times to each camera channel, the processor is able to "separately

and simultaneously control an integration time of each channel ... so that an image formed by combining data of a frame received simultaneously from the channels has a relatively large dynamic range." *Id.* at 5:5-11; *see also* id. at 5:15-18 ("[e]ach sensor camera channel has its own optics, photo-detection and readout mechanism that includes a plurality of picture elements (pixels) with *independent* signal integration time control"). Similarly the specification explains the control or determination of the integration time as follows: "multiple camera channels are configured to image the same field of view simultaneously, and each operates *independently under a different* integration time." *Id.* at 4:21-24; *see also id.* at 5:15-18 ("[e]ach sensor camera channel has its own optics, photo-detection and readout mechanism that includes a plurality of picture elements (pixels) with *independent signal integration* time control").

Each of these claims indicates to a POSITA the recited processing component's operations, including its input (claim 1: signals from sensors; claim 9: signals and data from sensors); function (claim 1: controlling integration time; claim 9: determining integration time and combining data to provide an image); and output (claim 1: control signals regarding integration time; claim 9: integration time determination and an image based on combined data). Based on the use of different claim language in claims 1 and 9, Toyota's single proposed construction for these two different "processing component" claim phrases is plainly inapt. Moreover, nothing in the intrinsic record warrants adopting Toyota's proposal for either of these claim phrases.

Moreover, the PTAB already interpreted these claim terms in accordance with IV's proposal in an IPR involving Toyota. the Board interpreted the "processing component" of Claim 1 as follows: "claim 1 also recites 'a processing component...' which similarly distinguishes the processing component's configuration as being able to control the integration time of an individual sensor *distinct from the other sensor(s) in the group*." Decision Denying Institution of Inter Partes

Review, *Toyota Motor Corp. v. Intellectual Ventures II LLC*, IPR2022-00710, Paper 13 (P.T.A.B. Oct. 26, 2022) at 12-13 (emphasis added).

2. "image capture device" (Claims 1 and 15)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
Plain and ordinary meaning, no construction	Plain and ordinary meaning, i.e., "A device
necessary	that captures an image"

The term "image capture device" in claims 1 and 15 of the '158 Patent has a plain and ordinary meaning to a POSITA that requires no further explanation. Claim 1, for example, recites: "An image capture device comprising: a plurality of sensors; a plurality of optics components, wherein each optics component of the plurality of optics components is configured to pass light to a sensor of the plurality of sensors; and a processing component configured to control an integration time of each sensor." '158 Patent at claim 1. By its own terms and based on its context within the claims, an "image capture device" is certainly involved in the process of capturing an image through its various components (*e.g.*, sensors, optics components, and a processing component), but the "image capture device" of claim 1 does not itself need to directly capture an image, as Toyota seems to propose.

The claims that depend from claim 1 specify additional components or configurations of the "image capture device," such as "an interface operatively coupled to the processing component" (claim 3); the processing component further configured to "control the integration time of each sensor during a frame" (claim 2), "to combine data from the plurality of sensors received to provide an image" (claim 5), or "to determine one or more integration times for a second frame based at least in part on the image" (claim 6); or the sensors "configured to image the same field of view" (claim 4). Like claim 5, independent claim 9 (directed to a "system") states that "the processing component is configured to combine data from the plurality of channels

received to provide an image." Toyota's proposal would effectively import this "provide an image" limitation from claims 5 and 9 into claim 1, which is improper absent clear and unmistakable lexicography or disclaimer.

In various embodiments described in the specification, the device's sensors comprise photodetector arrays that capture light/photons and convert the resulting data into electronic signals. *See*, *e.g.*, '158 Patent at 11:57-12:6, 13:48-54, 14:3-36, 18:64-19:30, 22:26-37; *see also id.* at 23:13-18 (defining "array"), 23:46-49 (defining "image sensor"), 23:60-64 (defining "photodetector" and "pixels"). The specification describes "image capture" by a digital camera, but that is not a definition or disclaimer. *See id.* at 3:39-50. There is no justifiable reason to adopt Toyota's proposal.

By including "an image," Toyota's proposed construction apparently seeks to import a limitation requiring exactly one single image. Such a proposal is inconsistent with the intrinsic record, which describes imaging a "field of view" but not limiting the imaging to exactly one image ('158 Patent at 4:22-24), and has already been rejected by the Western District of Texas. *See* Ex. M, *GM* Claim Construction Opinion at 51 (finding that "the claims do not require that all of the plurality of sensors be required to capture the exact same image").

3. "integration time" (Claims 1, 9, and 15)

Plaintiffs' Proposed Construction	Defendants' Proposed Construction
Plain and ordinary meaning, no	Plain and ordinary meaning, i.e., "the time the image
construction necessary	sensor collects and integrates signal from the scene"

The claim term "integration time" requires no construction. Toyota's argument to the contrary seems to rely on the following statement from the specification: "The amount of integrated photo-charge is directly related to the time the image sensor collects and integrates signal from the scene. This is known as integration time." '158 Patent at 4:3-6. But that passage

does not provide an express and unequivocal definition of the full scope of the term "integration time." Rather, the '158 Patent uses the term "integration time" as a sampling method to make adjustments to create more optimal pictures or to facilitate increased signal collection for a composite picture. *See id.* at 9:11-16 ("The image processor 270 can send a signal to the integration time controller 300 for real-time, or near real time, dynamic range management *by adjustment of each channels integration time control.* This same method can be used to optimize a subsequent single field exposure for optimal picture taking."), 9:25-26 ("The integration time control on camera channel 260A is increased to allow increased signal collection.").

The '158 Patent explains that the integration time for each channel can be automatically controlled and/or controlled in response to a user input (id. at 3:50-52) and can be obtained simultaneously or nearly simultaneously, so undesirable temporal aliasing from moving scenes or camera motion is minimized. Id. at 4:50-64. Image processor 270 generates a combined image based at least in part on the images from two or more of the camera channels (id. at 8:63-66) for real-time, or near real-time, dynamic range management by adjustment of each channel's integration time control. Id. at 9:11-14. For example, channel 260A is configured for low light, 260B for medium high, and 260C for high incident light. Id. at 10:4-8. The combined response provides a large dynamic range imaging capability in a single picture. *Id.* at 10:9-10. In other cases, all settings can be configured for "low incident light levels." *Id.* at 11:7-10. The '158 patent describes the use of integration time control settings and post- processing operations that are used to determine integration time on subsequent frames of data. See id. at Fig. 7 ("Determine integration time control settings that provide optimum dynamic range on subsequent frames of data using information of resultant image"), 11:40-43 ("Information of the resultant image and/or any post-processing operations is used to determine integration time control settings 710 that

provide optimum dynamic range on subsequent frames of data but is not so limited."). Thus, the '158 patent teaches using data to determine optimum dynamic range.

III. <u>CONCLUSION</u>

For these reasons, IV respectfully requests that the Court adopt its proposed constructions.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on December 6, 2022.

/s/ Jonathan K. Waldrop
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